

Notice of Allowability

Application No.

09/942,328

Examiner

Hong C Kim

Applicant(s)

VENKITAKRISHNAN ET AL.

Art Unit

2186

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address--

All claims being allowable, PROSECUTION ON THE MERITS IS (OR REMAINS) CLOSED in this application. If not included herewith (or previously mailed), a Notice of Allowance (PTOL-85) or other appropriate communication will be mailed in due course. **THIS NOTICE OF ALLOWABILITY IS NOT A GRANT OF PATENT RIGHTS.** This application is subject to withdrawal from issue at the initiative of the Office or upon petition by the applicant. See 37 CFR 1.313 and MPEP 1308.

1. ☒ This communication is responsive to amendment filed on 2/14/2005.
2. ☒ The allowed claim(s) is/are 1-2 and 4-17 which are renumbered to 1-16.
3. ☒ The drawings filed on 28 August 2001 are accepted by the Examiner.
4. ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
 - a) ☐ All b) ☐ Some* c) ☐ None of the:
 1. ☐ Certified copies of the priority documents have been received.
 2. ☐ Certified copies of the priority documents have been received in Application No. _____.
 3. ☐ Copies of the certified copies of the priority documents have been received in this national stage application from the International Bureau (PCT Rule 17.2(a)).

* Certified copies not received: _____.

Applicant has THREE MONTHS FROM THE "MAILING DATE" of this communication to file a reply complying with the requirements noted below. Failure to timely comply will result in ABANDONMENT of this application.

THIS THREE-MONTH PERIOD IS NOT EXTENDABLE.

5. ☐ A SUBSTITUTE OATH OR DECLARATION must be submitted. Note the attached EXAMINER'S AMENDMENT or NOTICE OF INFORMAL PATENT APPLICATION (PTO-152) which gives reason(s) why the oath or declaration is deficient.
 6. ☐ CORRECTED DRAWINGS (as "replacement sheets") must be submitted.
 - (a) ☐ including changes required by the Notice of Draftsperson's Patent Drawing Review (PTO-948) attached
 - 1) ☐ hereto or 2) ☐ to Paper No./Mail Date _____.
 - (b) ☐ including changes required by the attached Examiner's Amendment / Comment or in the Office action of Paper No./Mail Date _____.
- Identifying indicia such as the application number (see 37 CFR 1.84(c)) should be written on the drawings in the front (not the back) of each sheet. Replacement sheet(s) should be labeled as such in the header according to 37 CFR 1.121(d).
7. ☐ DEPOSIT OF and/or INFORMATION about the deposit of BIOLOGICAL MATERIAL must be submitted. Note the attached Examiner's comment regarding REQUIREMENT FOR THE DEPOSIT OF BIOLOGICAL MATERIAL.

Attachment(s)

- | | |
|---|--|
| 1. <input checked="" type="checkbox"/> Notice of References Cited (PTO-892) | 5. <input type="checkbox"/> Notice of Informal Patent Application (PTO-152) |
| 2. <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | 6. <input type="checkbox"/> Interview Summary (PTO-413),
Paper No./Mail Date _____. |
| 3. <input type="checkbox"/> Information Disclosure Statements (PTO-1449 or PTO/SB/08),
Paper No./Mail Date _____ | 7. <input checked="" type="checkbox"/> Examiner's Amendment/Comment |
| 4. <input type="checkbox"/> Examiner's Comment Regarding Requirement for Deposit
of Biological Material | 8. <input checked="" type="checkbox"/> Examiner's Statement of Reasons for Allowance |
| | 9. <input type="checkbox"/> Other _____. |



Detailed Action

1. Claims 1-2 and 4-17 are presented for examination. This office action is in response to the amendment filed on 2/14/2005.
2. Applicants are reminded of the duty to disclose information under 37 CFR 1.56.

EXAMINER'S AMENDMENT

3. An examiner's amendment to the record appears below. Should the changes and/or additions be unacceptable to applicant, an amendment may be filed as provided by 37 CFR 1.312. To ensure consideration of such an amendment, it MUST be submitted no later than the payment of the issue fee.
4. Authorization for this examiner's amendment was given in a telephone interview with Wendell Jones Attorney for Applicants (Reg. No. 45,961) February 23, 2004.

Application has been amended as follows:

In the claim:

As to claim 1 in line 1, add – cache – before “coherency”.

As to claims 4-7 in line 1, change “4” to – 1 – before “wherein”.

REASONS for ALLOWANCE

5. The following is an Examiner's statement of reasons for the indication of

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allowable subject matter: renumbered claims 1-16 are allowable over the prior art of record because the arguments set forth in the amendment filed on 2/14/2005 are persuasive. The claims are allowable over the prior art of record because the claims are distinguished from the prior art of record for the reasons as set forth in the amendment filed on 2/14/2005 and because an update of a search previously made does not detect the combined claimed elements as set forth in the claims 1-16.

Specifically, claims are allowable over the prior art of record because none of the prior art of record teaches or fairly suggests a cache coherency maintenance system, comprises a plurality of cache memories; a plurality of processor cores included on a single substrate; and a coherency system bus wherein a coherency protocol associates a pending state with a cache line, wherein the pending state is one of a plurality of states comprising a pending invalidate write miss state, pending copy back state, and pending copy forward state as described in the specification and together with combination of other claimed element as set forth in the claims. Also the reasons for allowance of the claims over the prior art of record is believed to be clear from the prosecution records taken as a whole. Therefore, claims 1-16 are allowable over the prior art of records.

6. Any comments considered necessary by applicant must be submitted no later than the payment of the Issue Fee and, to avoid processing delays, should preferably **accompany** the Issue Fee. Such submissions should be clearly labeled "Comments on Statement of Reasons For Allowance."

7. Any response to this action should be mailed to:

Commissioner of Patents
P.O. Box 1450
Alexandria, VA 22313-1450

Or faxed to TC-2100:
(703) 872-9306

Hand-delivered responses should be brought to the Customer Service Window (Randolph Building, 401 Dulany Street, Alexandria, VA 22314).

8. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Hong Kim whose telephone number is (571) 272-4181.

The examiner can normally be reached on M-F 9:00 to 6:00.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Matt Kim can be reached on (571) 272-4182. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

Any inquiry of a general nature or relating to the status of this application should be directed to the TC 2100 whose telephone number is (571) 272-2100.

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9. Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

A handwritten signature in black ink, appearing to read 'H Kim', with a stylized flourish at the end.

H Kim
Primary Patent Examiner
February 23, 2005